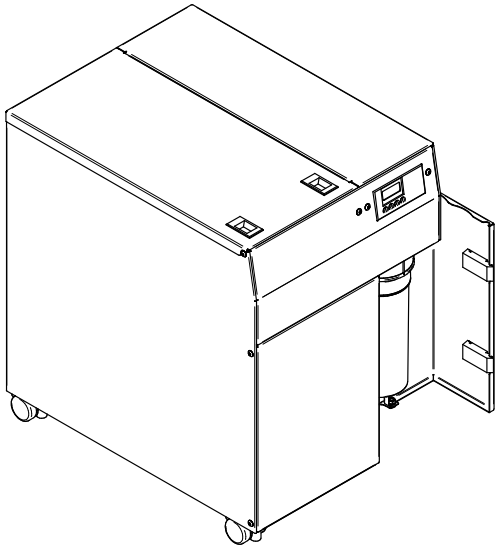
MANUAL

use and maintenance

UO-COMPACT 150



Before introduction of the softener the installation guide has to be read carefully.
For any disturbances cause by disregarding the instructions evo-water doesn't accept liability.

SERIAL NO.: _____

PART NUMBER:

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1. GENERAL INFORMATIONS

1.1. MANUFACTURER / ASSISTANCE

BUILDER	ASSISTENCE
EVO-WATER oHG **Falkenstr 2** **Westerheim 72589 Germany**	Personal Data of the Retail Seller

1.2. CERTIFICATION

UO-COMPACT 150 was manufactured in compliance with the following EU Directives:

Machines	*2006/42/EC*
Low Voltage	*2006/95/EC*
Electromagnetic Compliance	*2004/108/EC*

Household and similar electrical appliances – Safety, Part 1: General requirements EC EN60335-1:2004.

The machine also comes equipped with a leakage alarm system.

1.3. PURPOSE OF THE MANUAL AND ITS CONTENTS

This manual was written in order to supply the user with all the necessary information needed to facilitate the autonomous and safe operation of this device. The manual contains information that is critical to the operation and regular maintenance of the machine.

WARNING

This user's manual can be utilized by both technical and maintenance personnel.

All users and technicians are required to thoroughly read this manual before installing or operating this device.

In accordance with this manual, the user should never perform any unauthorized maintenance exclusively reserved for qualified technicians and maintenance personnel, otherwise the guarantee will be rendered null and void.

1.4 CARE AND STORAGE OF THE MANUAL

The instruction manual is an integral part of this device and must be kept nearby at all times, and stored inside the proper container so that it is protected from eventual damage or destruction.

1.5. IMPORTANT SYMBOLS TO REMEMBER

GENERAL WARNINGS

This symbol Indicates warnings or key information regarding the operation of this device. Please pay close attention whenever you see this symbol.

This symbol Indicates that specialized/portable equipment may be required to adjust or repair the components of the device.

This symbol Indicates that a visual or in-depth inspection, etc. of the device may be required.

INDICATIONS OF DANGER

This symbol Indicates General cautions; risk to the operator.

This symbol Indicates danger of electrical shock or electrocution.

RESTRICTIONS

This symbol indicates general restrictions.

2. CHARACTERISTICS OF THE DEVICE

2.1. RECOMMENDED USE

UO-COMPACT 150 is equipment designed for dish/glass wash machine water treatment. It is able to modify organoleptic and chemical characteristics of potable water, reducing saline content.
UO-COMPACT 150 is used to supply treated water to dishwasher and glasswasher machines.

ATTENTION

The device is not intended to be used by people (including children) whose physical, sensory or mental disabilities are reduced, or lack of experience or knowledge, unless they have been granted through the intermediary of a person responsible for their safety, supervision or instruction concerning the use of the device. Children should be supervised to ensure they do not play with the appliance.

ATTENTION

If the dish/wash machine is not equipped with break tank, an external pressure tank of at least 16 liters must be installed.

All components of the dish/glass washmachine in contact with water must be compatible with osmosis trated water.

It is forbidden to use brass; use only plastic parts and stainless steel parts.

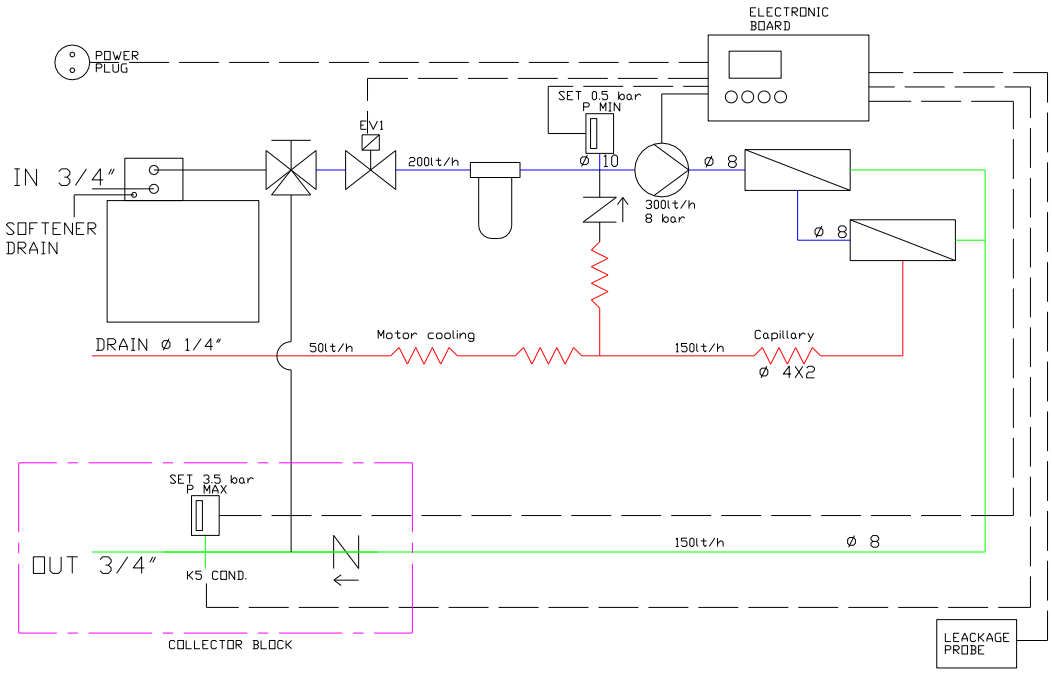
The company EVOWATER is not responsible of any demage or injury to things or people if these instructions are not respected.

ATTENTION

UO-COMPACT 150 is not a water purifier.
Using UO-COMPACT 150 to condition water that is not drinkable is ABSOLUTELY PROHIBITED.

2.2. SCHEMATIC REPRESENTATION

SCHEMATIC REPRESENTATION



2.3 DESCRIPTION

There are four external hydraulic connections on the back of the device, respectively, for the inlet water ¾"G, the outlet water ¾"G to the dish/washmachine, the osmosis drain (1/4" diameter) and the softener drain (barb hose 12mm).
On the rearside of the machine, there is also the power cord, the knob of the manual bypass valve and air vents. There is an electronic display screen attached to the front of the device, providing the user with important messages regarding the correct operation of the machine.

From the connection to the inlet, the water arrives to the softener, then after the softener to the manual bypass valve. The brine tank is accessible opening the top left cover.
The valve has three positions: open, bypass and closed. In the open position, water flows to the hydraulic components of the machine for standard operating. In the bypass position, the osmosis device is excluded and softened water is supplied to the outlet of the machine. In closed position, water flow is closed.
After the manual valve, water arrives to the inlet solenoid valve.

The water flows then through the quick connection carbon filter. The carbon block filter facilitates the elimination of the unpleasant chlorine taste, without compromising the desirable mineral properties of the water. These activated carbon filters can also absorb potential trace organic micro pollutants, various chemicals — organic and inorganic (i.e. chlorine composites), chlorine residue used to disinfect water, haloforms, pesticides, surface-active agents. The filter is hidden by the filter cover on the right side.

After the filter, a min pressure switch is attached to check inlet pressure.
The min pressure switch prevents the pump to run dry. In chase of low pressure, alarm is displayed and then the machine makes automatic restart after one minute. When consecutives low pressure alarm occures, the restart delay automatically increases.

Water is then pumped at high pressure by the brass vane pump connected to the liquid cooled motor. The water arrives at high pressure to the vessels contain the reverse osmosis membranes. The water permeates the layer flowing into the collection tubes, and then it is directed to the main tube of the membrane, wrapped in various layers. The permeate yield comes from the main tube of the membrane and is sent directly to the outlet.

The drainage flow is also used to cool the motor with a cooling copper pipe and than coupled to the drain connection. The calibrated drain capillary is used to set the drain flow.
Permeate water is controlled by a conductivity probe wired to the electronic board; in chase of high conductivity (>70 µS/cm after 50 seconds from operative start), the board shows high conductivity alarm. After four consecutive high cond alarms, the machine also makes three beeps after 50 seconds from operative start if high cond alarm occurs.
For automatic start/stop of the machine, a check valve and a max pressure switch are installed in the permeate collector block.
On the bottom there is a leakage probe; if leakage occurs the machine stops automatically and makes acustic and visual alarm. The machine is equipped with four wheels with breaks.

WARNING

The overall water quality depends on a number of variables: the concentration of saline properties in the water, along with other retained elements, the temperature, water pressure, and the total solubility of salt. The water quality may also vary according to the kinds of salts or elements found in the local water source.

The treatment of water coming from a source that is particularly polluted with high concentrations of impurities can cause the blockage of the membranes of the filters and/or impede the overall water flow.

This device CANNOT be used as a substitute for a government approved desalinization and anti-bacteriological plant.

2.4 TECHNICAL SPECIFICATIONS

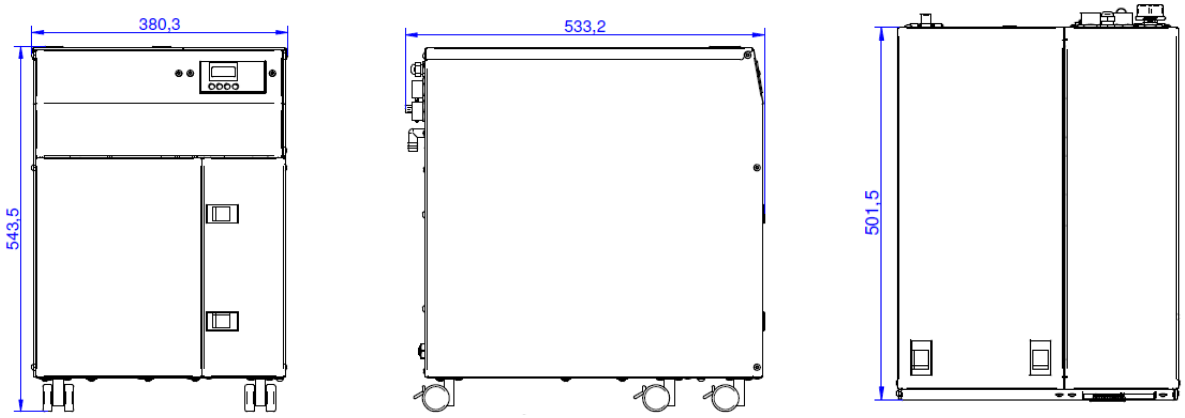
TECHNICAL SPECIFICATIONS		
Height x Width x Depth (vertical position)	380X533X544	mm
Approved level of safeguards and protections	IP23	
Weight	40	kg
Approved Decibel Level under normal operating conditions	55	dB(A)
Max umidity	95	%
WATER SUPPLY SPECIFICATIONS		
Water type	POTABLE	
Maximum temperature	35	° C
Minimum inlet capacity	300	l/h
Minimum inlet pressure	100	kPa
Maximum inlet pressure	600	Kpa
POWER SUPPLY SPECIFICATIONS		
Power supply type	SINGLEPHASE + GROUND	
Voltage	230	V
Frequency	50	Hz
Absorbed current	1.5	A
Fuse type (electronic board)	T3.15A	
PERMEATE WATER SPECIFICATIONS		
Minimum capacity at 15°C	90	l/h
OPERATION UNDER NORMAL WORKING CONDITIONS		
Activated carbon filter	200 h (max 6 months)	
R/O Membrane	When high cond. alarm occurs (> 70 µS)	
Vane pump and solenoid valve	2.000 h	
DRAIN CAPILLARY COLOUR AND RECOVERY RATIO MATRIX		
Minimum capacity at 15°C	90	l/h

The machine must not be installed with inlet water > 1200 µS.

WARNING

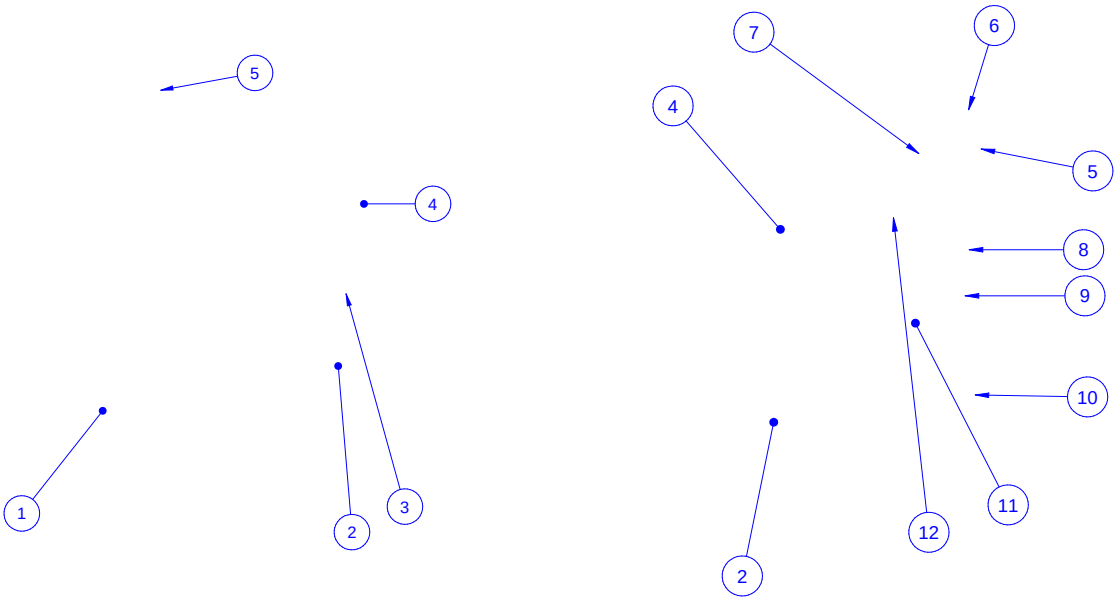
Any use of this device, which has not been stipulated in this manual, will constitute IMPROPER USE, thereby rendering the guarantee null and void. The manufacture WILL NOT be liable for any damages caused by the IMPROPER USE of this device, due to negligence, failure to follow the manual, or permitting unauthorized maintenance personnel to tamper with machine.

2.5 GENERAL DIMENSIONS



2.6 INTERNAL LAYOUT

1. Softener
2. Filter cartridge
3. Filter head
4. Electronic board
5. Solenoid valve 3/8”G
6. Max pressure switch
7. Softener connections
8. Min pressure switch
9. Motor 180W
10. Pump 300l/h
11. Membrane housing 3012 300gpd
12. Membrane head



3. INSTALLATION

The installation of the UO-COMPACT 150 must be performed by qualified personnel in accordance with applicable laws and standards. The machine has connections for inlet water, outlet water, osmosis drain and softener drain. Once done the hydraulic connection, connect the power cord.
During normal operations, the bypass valve must be in "OPEN" position.

WARNING

Please avoid exposure to sudden changes in temperature, thereby causing internal condensation to form and damage electronic parts.

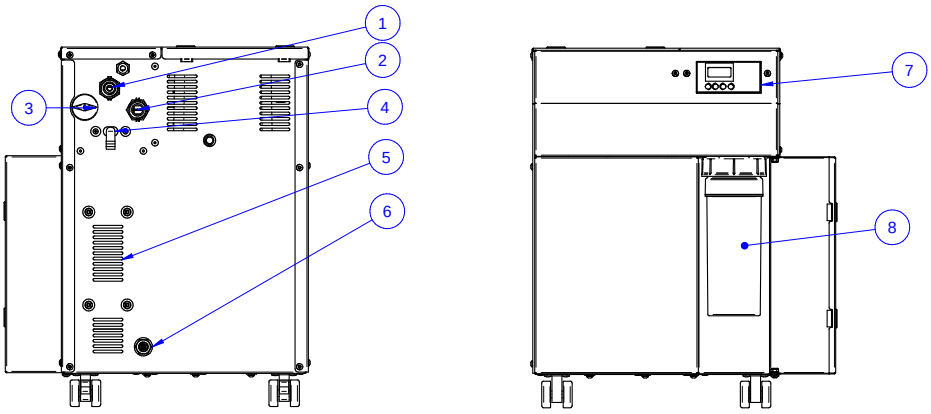
Please ensure that the grill panel is never obstructed, which could lead to the overheating of the motor of the device.

INSTALLATION CHECK LIST

The EU approved ground cable of the power supply must be connected to the device.
The power supply cable must be compatible with the device as indicated on the required tags and labels affixed to the rear of the machine.
The electrical cable of the circuit must not be less than 1 mm in diameter
The voltage of the device must comply with the standards of the local area or country (power surges must be limited to no more than 10%)

Key:

1. Inlet water connection
2. Outlet water connection
3. Manual bypass valve
4. Drain softener
5. Air vent
6. Drain
7. Electronic board
8. Filter cartridge



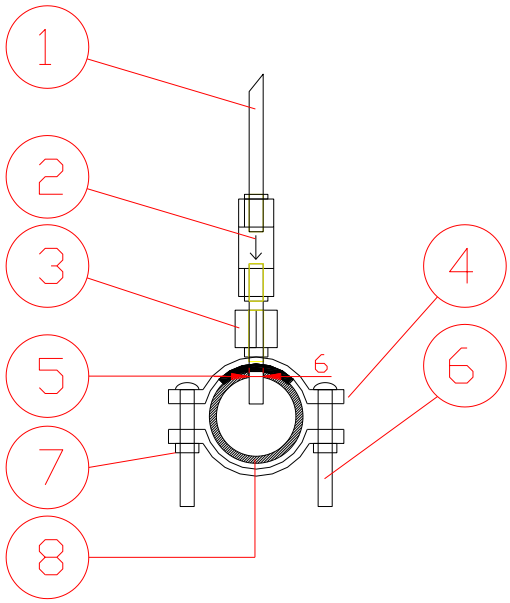
WARNING

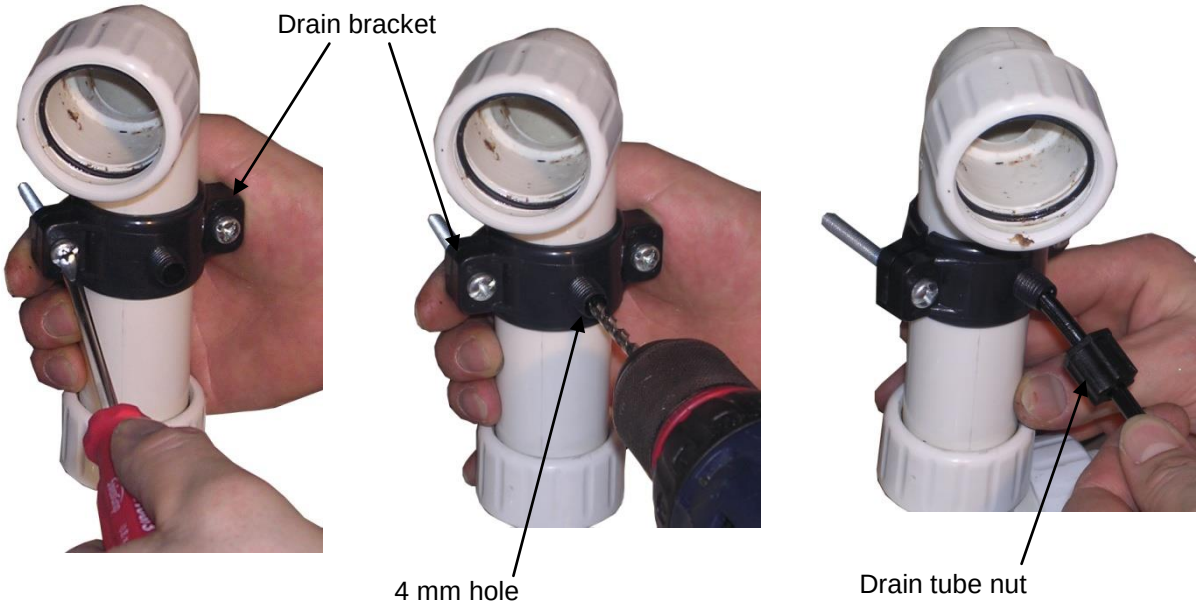
Before water inlet, a water safety device in compliance with EN1717 must be installed.

3.1 DRAIN BRACKET TYPICAL INSTALLATION

- Install the drain bracket on the 40mm diam. sink drain siphon.
  Check that the seal rests properly on the pipe and the bolts are tight.
- Remove the nut of the drain.
- By using a 4 mm drill bit, drill a hole in the exhaust pipe of the siphon, at the nut just disassembled.
- Insert the drain pipe into the nut for about 2 cm and tighten the nut on the bracket.
- Tighten the nut and install the valve with the arrow pointing towards the bracket, as close as possible to the drain.

1. ¼" drain tube
2. ¼" non-return valve
3. Drain pipe fixing nut
4. Drain bracket
5. Seal
6. Nut
7. Fixing bolt nut
8. Silk drainage pipe





4. FUNCTIONING

4.1 FIRST START-UP

WARNING

The first start-up of the machine must be done by the installer.
The installer checks the correct functioning of the machine.

WARNING

Before start-up the osmosis, turn the bypass valve to BY-PASS position and make the start up of the softener as described in the attached manual.

Once done the softener start-up, turn the bypass valve to OPEN position and start the osmosis machine.

Insert the power plug in a grounded socket 230V 50Hz; the machine is ready to operate.

It is necessary to fill the dishwasher once with the new installed UO-COMPACT 150 and drain the dishwasher one time completely.

Check any leakage in the hydraulic circuit.

4.2 NORMAL USE

The machine starts and stops automatically leaded by the internal max pressure switch when the dish/washmachine downstream requires water.

During normal use, the manual bypass valve must be in "OPEN" position.

WARNING

Avoid dehydration of the membranes, as it will cause them to malfunction.

4.2.1 Automatic flushing function

In order to avoid bacterial growth on the surface of the membrane, the device will automatically operate the "flushing" mode every 1 hour. This process consists of the substitution of stagnate water with fresh water (inside the membrane). During this operation the solenoid valve will open for 1 minute. The amount of drained water depends on inlet pressure and is approx 2 liters.

4.3 MANUAL BYPASS

In chase of problems with the osmosis machine, it is possible to bypass the internal equipment turning the bypass valve from OPEN position to BY-PASS position and supplying softened water to outlet.

If manual valve is turned to by-pass position, disconnect the power plug.

4.4 ELECTRONIC BOARD FUNCTIONING

ELECTRONIC BOARD FUNCTION KEYS

Key ENTER allows to enter program pages and parameter confirm.

Key +, allows to scroll program pages and to increase the selected value.

Key -, allows to scroll program pages and to decrease the selected value.

Key ON-OFF, allows to set the board in sleep mode.

WARNING

The electronic board is already programmed for correct functioning of the product.
The installer and the user can modify program parameters (interval between maintenances); the modify of these parameters is up to the installer/user; in this chase, The producer declines any responsibility of the correct functioning of the machine.

Normal functioning

EVO WATER

When the board is in stand-by mode, the name of the installer is displayed.

Cond. uS 0000

When the dishwasher requires water, the machine starts to produce permeate water; pushing the key ENTER , the conductivity is displayed.

When the dishwasher stops water requirement, the board returns in stand-by mode.

High Cond.

If after 50 seconds from pump start, the conductivity is over 70 µS/cm, the display shows “High cond.” for high conductivity alarm.
After four consecutive high cond alarms, the machine also makes three beeps after 50 seconds from operative start if high cond alarm occurs.
High cond alarm is only a visual and acustic alarm; machine continues to work.

Low pressure alarm

Alarm P. min

When pump is on, if low pressure failure occurs, the display shows “Alarm P. min” and the board makes a beep.
The machine restarts automatically after 1 minute. If consecutive low pressure alarm occurs, the restart delay automatically increases.

To restart the machine, immediately turn OFF and ON with the key .
The min pressure alarm is ignored during the first 20 seconds from operative start.

Leakage alarm

Alarm Leakage

If water leakage alarm occurs, the machine stops and makes a continuous beep displaying “Alarm Leakage”.

To restart the machine, turn OFF and ON with the key .

Filter change Alarm

Filter Change

The filter has a lifetime of 140hours of work. Once reached this limit, the board shows “Filter Change”. Replace the cartridge and perform filter reset (see next page).

4.5 INFORMATION PAGES

EVO WATER

When the board is in stand-by mode, the name of the installer is displayed.

Microtek Ver 1.21

Pushing the key , the electronic board software version is displayed.

Manual Flush.
Flush.

To scroll the information pages, push key ; the first page shows the manual flushing page; to perform this operation, push key . During manual flush operation, the board displays “Flushing” and opens the solenoid valve for 1 minute.

Reset Filter
Press > Reset

Pushing the key , the display shows “Reset filter” page

To enter filter reset, press the key and the confirm Filter reset pressing another time the key the display shows “Data saved”.

T Remain 0000:00

Pushing for another time the key ; the next information page shows the remaining time before filter change.

T Total 0000:00

Pushing for another time the key ; the page shows the total operating time since last filter change.

4.6 SETTINGS PAGES

Settings Press >

To enter programming mode, push the key while you connect the power supply of the machine.

Then push the key and confirm programming mode.

Scroll the pages with the keys and .

To exit programming mode, disconnect and reconnect the power supply.

Data Saved

Each time a value is modified, push the key to save the data; the display will show “data saved” and will return to program pages.

Reset Filter

The first page displayed is “Filter reset” page; enter with the key .

Press > Reset

The display shows “Press E Reset”; confirm Filter reset with the key ; the board will then display “data saved”.

Setting Faucet

Scroll to the next page with the key ; enter faucet type selection with the

Faucet electric

key . Choose faucet type (manual or electric) with the keys and and confirm with the key . The board will show “data saved”.

If manual faucet is selected, the high cond. alarm function is disabled.

Setting Customer

Scroll to the next page with the key ; enter customer setting page with the

EVO WATER

key . Select “EVO WATER” or “UO-COMPACT” with the keys and and confirm with the key . The board will show “data saved”.

Setting Mode	Scroll to the next page with the key ; enter functioning mode page with the key . Select time-limited functioning or no-limit functioning with the keys and and confirm with the key . The board will show “data saved”.
Mode Time l.	

In Ho.Re.Ca. applications, it is recommended to set “Time Limit” Functioning.

Setting K convrs	Scroll to the next page with the key ; enter liters/hour conversion parameter with the key . Modify the value with the keys and and confirm with the key . The board will show “data saved”.
K convrs 0120	

Setting Time	Scroll to the next page with the key ; enter filters maintenance interval with the key . Modify the value with the keys and and confirm with the key . The board will show “data saved”.
Time h 0142	

Setting Language	Move to the next page with the key ; modify the language parameter with the key . Set the language with the keys and and confirm with the key . The card therefore indicateds “Data saved”.
English	

5. ENDUSER ORDINARY MAINTENANCE

The tasks of the enduser are:

- Softener salt refill (every month)
- Filter replacement (every 200 hours of working)

ATTENTION

Use only original parts EVOWATER.

WARNING

The internal electrical system of the UO-COMPACT 150 is powered by 230 Volts. Prior to opening the device, remove the cover and/or panels and/or the protective grill, ensuring that the plug has been removed from the electrical outlet.

WARNING

The enduser MUST NOT open the covers of the machine that are fixed with screws.

DO NOT use corrosive products, acids, steel wool or wire brushes to clean the device.
DO NOT use low or high pressure jets of water when washing the device.

To replace the cartridge, follow these steps:

1. Open the filter cover pulling right the two locks.
2. Turn the cartridge 90° clockwise until the head assembly is in closed position.
3. Pull the cartridge form the head.
4. Install the new cartridge and turn counter-clockwise 90°.
5. Dry with a clean any water.
6. Close the cover

Insert power plug and make filter reset on the electronic board.

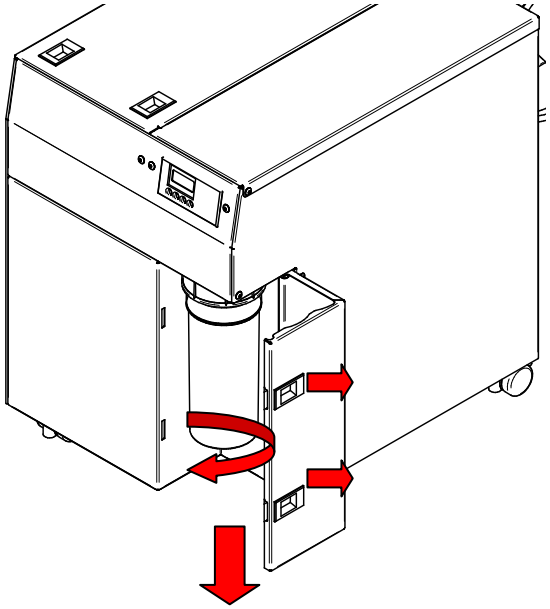
5.1 FILTER REPLACEMENT

To replace external prefilter, follow these steps:

Remove the power plug.

ATTENTION

Use only original parts EVOWATER.

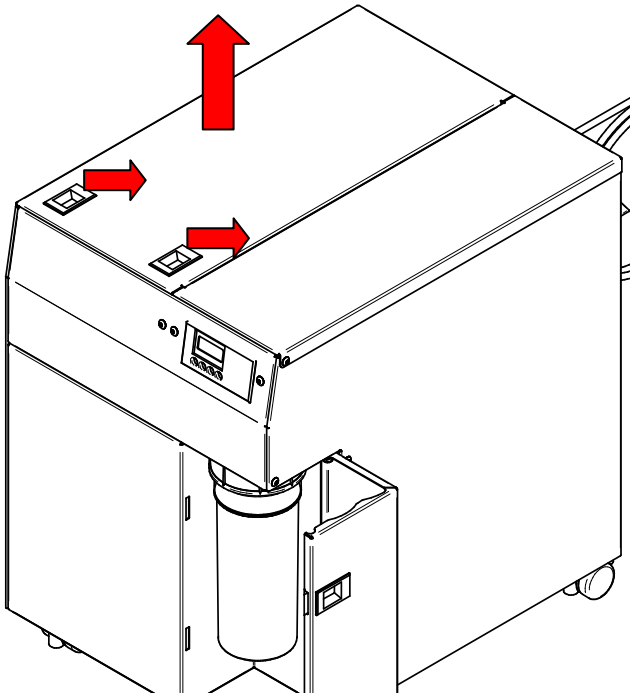


To load the salt, follow these steps

1. Pull the two locks of the top cover
2. Turn the cartridge 90° clockwise until the head assembly is in closed position.
3. Pull the cartridge form the head.
4. Install the new cartridge and turn counter-clockwise 90°.
5. Dry with a clean any water.
6. Close the cover

5.2 SOFTENER SALT REFILL

Remove the power plug.



6. PROFESSIONAL EXTRAORDINARY MAINTENANCE

ATTENTION

The internal UO-COMPACT 150 electrical apparatus is fed by 230 Volts electrical current.
Before opening the machine, make sure the machine is unplugged.

6.1. REQUIRED TRAINING FOR MAINTENANCE PERSONNEL

Maintenance personnel must possess the following qualifications as prescribed in this manual:

- An adequate knowledge of standard EU approved safety procedures
- The required technical knowledge to understand the concepts outlined in this manual.
- Knowledge of basic hygiene
- General familiarity with the device, in addition to a basic knowledge of troubleshooting electrical and hydraulic problems

6.2. RESPONSIBILITIES OF MAINTENANCE PERSONNEL

The overall maintenance plan, described in this chapter, must be rigidly adhered to as indicated in the above paragraph, in order to maintain the efficient operation of the device, thereby guaranteeing continued water quality.
The tasks listed in the box below must be performed by qualified technical personnel, strictly in accordance with the manual, exclusively using approved parts and materials. Otherwise the guarantee will be null and void. The maintenance performed must always be documented properly and signed by the technician in the space provided on the attached maintenance log.

OVERALL INSPECTIONS	TASK	FREQUENCY
Vane pump and solenoid valve	Substitution	2000 hours
Membranes	Substitution	When high conductivity alarm occurs.
Machinery	Visual Inspection to check the integrity of system controls	In chase of functional damage
	General cleaning	
	Operation Verification	
Machinery	Sanitization	In chase of permeate water bad smell

WARNING

The internal electrical system of the UO-COMPACT 150 is powered by 230 Volts.
Prior to remove the covers, ensuring that the plug out is diconnected.

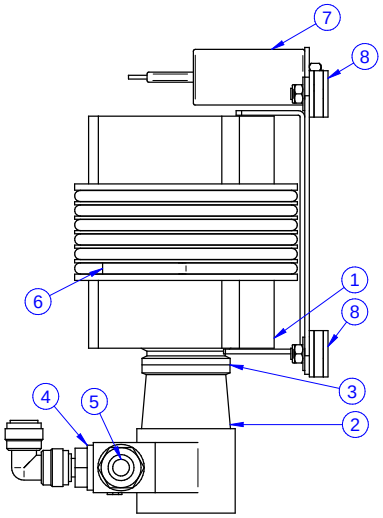
WARNING

DO NOT use corrosive products, acids, steel wool or wire brushes to clean the device.
DO NOT use low or high pressure jets of water when washing the device.

6.3 PUMP REPLACEMENT

Remove the top and right panels of the machine.
Disconnect the piping from the pump fittings.
Unscrew the screw of the clamp connecting and disassemble the pump.
Install the new pump with fittings previously removed.
Mount the new preadjusted and sealed pump with reverse procedure.

1. Motor 180W liquid cooled
2. Brass vane pump 300l/h
3. Connection joint
4. Fittings
5. Pump bypass
6. Liquid cooling couplings
7. Condenser 7µF
8. Bumpers



6.4 SOLENOID VALVE INTERNAL CLEANING/REPLACEMENT

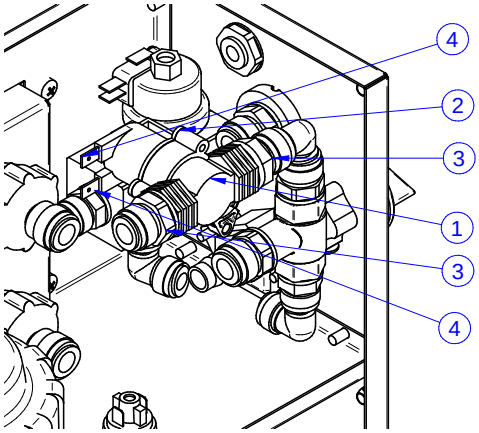
If during stand by or with machine OFF, the water continues to flow to the drain, the solenoid valve never closes inlet water. In this chase, make internal cleaning of the solenoid valve body.

If during normal functioning, water never flows to the filter and “Alarm P Min” appears, the solenoid valve never opens inlet water. In this chase, replace the coil, or the whole solenoid valve.

To clean the solenoid valve and/or replace the coil:
Remove the power plug and open top cover.
Unscrew the three screws that fix the coil to the solenoid valve body.
Disassemble the coil and internal parts of the solenoid valve.
If damaged, replace the coil; clean the body of the solenoid valve with compressed air.
Reassembly with reverse procedure.

To replace the solenoid valve:
Remove the power plug and open top cover.
Disconnect coil faston connectors.
Remove the solenoid valve and unscrew the fittings.
Install the fittings in the new solenoid valve, reconnect piping and electric connectors.

1. Solenoid valve body
2. Coil fixing screws
3. Fittings
4. Coil faston connectors

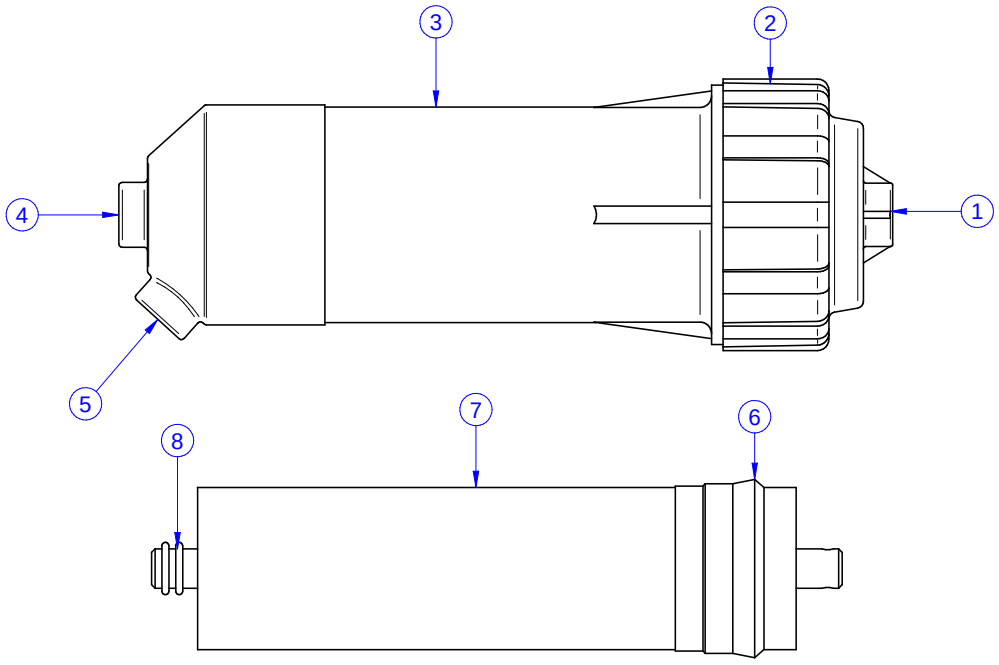


6.5 CHECK/REPLACEMENT OF OSMOTIC MEMBRANES

When high conductivity alarm occurs, replace the osmotic membrane as follows.

Disconnect the tubes from the fittings of the vessel containing the membrane.
Dismantle the vessel from the machine and unscrew the caps.
Dismantle the membranes clogged and replace with new membranes of the same type.
Clean the vessel on the inside by removing all traces of dirt and scale.
The new membrane must be removed immediately prior to their installation and handling, using protective gloves sterile.
Before installing the membrane in the vessel, lubricate the o-ring and the upper seal.
Install the vessel with reverse procedure.
Supply water for at least 15 minutes, and then check permeated flow and quality.

1. Inlet
2. Cap
3. Vessel body
4. Permeate
5. Drain
6. Seal
7. Membrane
8. O - rings



6.6 POWER CABLE REPLACEMENT

If the supply cord is damaged, it must be replaced by the manufacturer or by the authorized technical personnel in order to avoid a hazard.

6.7 MACHINE SANITATION

Perform the sanitation if permeate water has a bad smell.

All sanitation operations must be performed by qualified personell.

Use protective clothing to the skin, hands and eyes as shown in the safety data sheet of chemicals used.

Disconnect the permeate pipe and fill a tank with approx 3,5 liters of permeate water.

Add 250ml hydrogen peroxide 10 vol (3%) to achieve a concentration of 0.2% by weight.

Connect the water pipes of entry, drain and permeated by the machine, at the tank; make a bridge on the low pressure switch connectors. Turn on the machine and let the solution recirculate for 10 minutes.
Wait 10 minutes that the solution acts on the machine.
Reconnect the inlet, drain and permeated pipes.
Replace the filter and reconnect the cables of the minimum pressure switch.
Turn on the machine, fill and empty the dishwasher tank once, until the sanification solution resids are totally drained.

6.8 FREEZE PREVENTION TREATMENT

Perform the freeze prevention treatment if after the start up, the machine will be stocked below 0°C.

The operation must be performed by qualified personell.

Disconnect the permeate pipe and fill a tank with 9 liters of permeate water.
Add 1liter of propylenic atossic glycole.

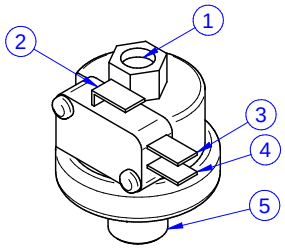
Connect the water pipes of entry, drain and permeated by the machine, at the tank; make a bridge on the low pressure switch connectors. Turn on the machine and let the solution recirculate for 10 minutes.

Reconnect the inlet, drain and permeated pipes, and the cables of low pressure switch. At the restart after inactivity period, fill and empty the dishwasher tank once, until the freeze prevention solution resides are totally drained.

6.9 VERIFICATION/CALIBRATION OF THE SETTING

The verification/calibration of the settings must be done at extraordinary maintenance of the relative items and/or on troubleshooting operations.

Install a preadjusted to 350 kPa sealed pressure switchin the permeate block.
Check pressure with a manometer.



All the calibrations must be performed by qualified personnel.

6.9.1 Max pressure switch setting

1. Adjustment nut
2. COM connector
3. Normally opened contact
4. Normally closed contact
5. Fitting ¼" M

Install a preadjusted to 30 kPa sealed pressure switch on the filter outlet pipe.
Check pressure with a manometer.

Max pressure switch is wired to COM connector (2) and Normally closed contact (4).

6.9.2 Min pressure switch setting

6.10 CLEANING CONDUCTIVITY PROBE CONNECTORS

Disconnect the connectors of the conductivity probe.

Clean the male and female connectors from possible oxidation.

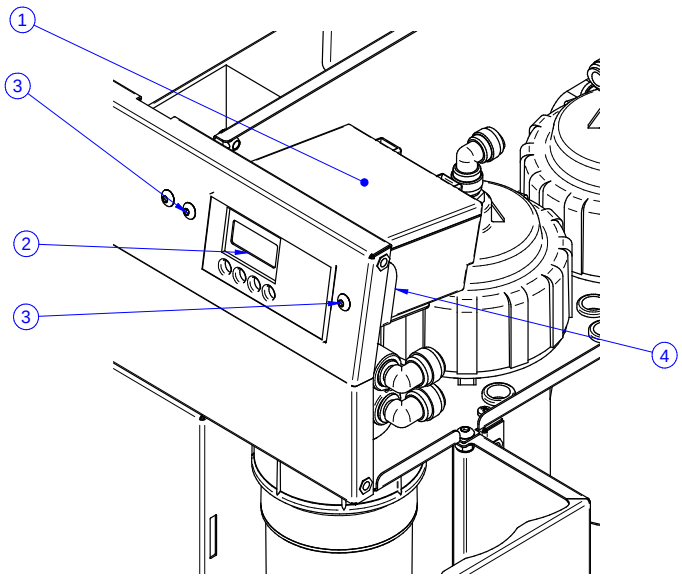
Tighten the connector with pliers and reassembly.
Perform conductivity calibration.

Clean the conductivity probe connectors if the measured value is not correct.

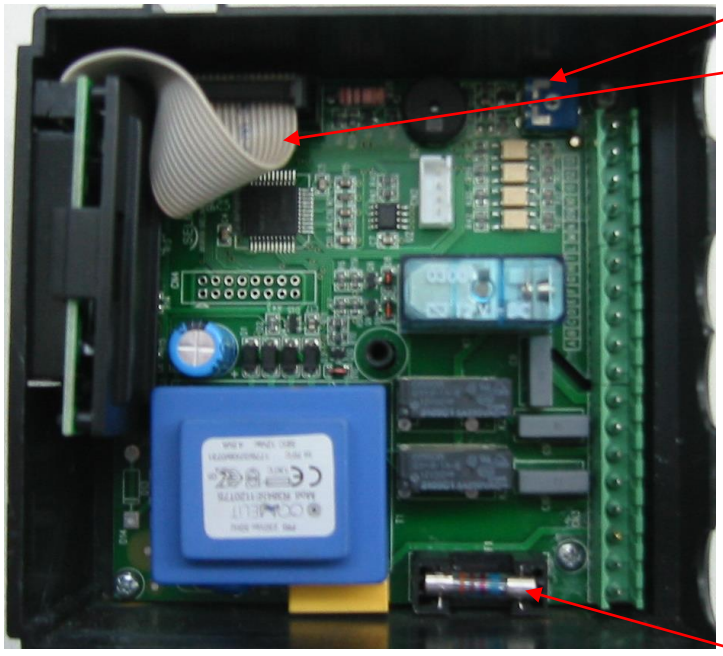
6.11 ELECTRONIC BOARD EXTRAORDINARY MAINTENANCE

Remove the top cover of the machine, accessing the tray card.
Remove the cover of the electronic box.
If the fuse is burned, replace with another one.
Check the tightness of main terminal connector and of the display connector.
If the board continues to malfunction, replace with another one, following these steps:

- Unscrew the screws fastening the electronic board box and remove support plate.
- Remove the electronic board box and disconnect the main connector.
- Mount the new electronic board with reverse procedure.



1. Electronic board
2. Display electronic board
3. Fastening screw
4. Board support plate



Conductivity adjustment trimmer
Display connector
Terminal board connections:
18. Conductivity probe
17. Conductivity probe
16. Leakage probe
15. Leakage probe
14. Max pressure switch
13. Max pressure switch
12. Min pressure switch
11. Min pressure switch
10. Electric faucet signal (not used)
9. Electric faucet signal (not used)
8. Motor
7. Motor
6. Solenoid valve EV1
5. Solenoid valve EV1
4. Solenoid valve EV2 (not used)
3. Solenoid valve EV2 (not used)
2. Power supply 230V
1. Power supply 230V
Fuse

7 TROUBLESHOOTING

For the softener troubleshooting, see attached manual.

Problem:	The display is off.
Cause	**Solution**
Electric supply failure.	Check power plug is connected.
Burned fuse.	Check power socket fuse and electronic board fuse.
Display cable removed.	Check display cable is connected on the board socket.
Damaged board.	Replace the board.

Problem:	The display shows “Alarm P.Min”
Cause	**Solution**
Water inlet pressure failure.	With a manometer, check that dynamic water inlet pressure is at least 1 kPa.
Inlet solenoid valve failure.	Check water inlet solenoid valve functioning, if damaged or clogged, replace it.
Low pressure switch failure.	Check pressure switch functioning, if damaged replace it.
Damaged board.	Replace the board.
Filter clogged.	Replace the filter.
Electric connection failure.	Check electric connections and tight if necessary.

Problem:	The display shows “Alarm Leakage”
Cause	**Solution**
Leakage	Open the machine and check carefully all hydraulic circuit for leakages.
Leakage probe in short circuit.	Check water leakage position; if directly at contact with metal parts of the machine, place in a different position.
Damaged board.	Replace the board.

Problem:	The display shows “Filter Change” after a few hours of working.
Cause	**Solution**
Damaged board.	Replace the board.

Problem:	With the board on, at operating start, the motor never starts.
Cause	**Solution**
Blocked pump.	Replace the pump.
Burned motor condenser.	Replace the motor condenser.
Burned motor.	Replace the motor.
Electric connection failure.	Check electric connections and tight if necessary.

Problem:	With the board on, at operating start, the inlet solenoid valve never opens.
Cause	**Solution**
Solenoid valve damaged.	Replace the solenoid valve.
Coil burned.	Replace solenoid valve coil.
Electric connection failure.	Check electric connections and tight if necessary.

Problem:	Low permeate water production.
Cause	**Solution**
Clogged solenoid valve.	Check solenoid valve functioning, if clogged, replace it.
Clogged filter.	Replace the filter.
Blocked vane pump	Replace the pump.
Clogged membranes.	Replace the membranes.

☞ **Install a manometer on the pump outlet to check operating pressure (§ 6.8.3)**

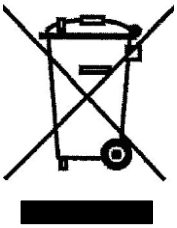
Problem:	The display shows " High cond" alarm.
Cause	**Solution**
Clogged membranes	Checks permeate quality with a calibrated instrument; if high cond. replaces membranes.
Conductivity measurement failure	Calibrate conductivity probe and clean connectors.

Problem:	Treated water has a bad taste.
Cause	**Solution**
Exausted filters.	Replace the filters.
Biofouling.	Make machine disinfection.

Problem:	With the faucet closed, the machine restarts for a few seconds.
Cause	**Solution**
Check valve damaged.	Replace the check valve installed on the permeate line before max. Pressure switch (install a manometer on permeate line and check water pressure on permeate line).
Water leakage.	Check the permeate hydraulic circuit for leakages (install a manometer on permeate line and check water pressure on permeate line).

Problem:	When dishwasher requires water, the machine doesn't start
Cause	**Solution**
Defective pressure switch.	Check pressure switch functioning, if damaged replace it.
Electric connection failure.	Check electric connections and tight if necessary.

Problem:	When dishwater stops water requirement, the machine never stops
Cause	**Solution**
Defective pressure switch.	Check pressure switch functioning, if damaged replace it.
Damaged board.	Replace the board.



WASTE OF ELECTRICAL / ELECTRONIC EQUIPMENT
RACCOLTA RIFIUTI DI MATERIALE ELETTRICO / ELETTRONICO
RECOLHA DE RESÍDUOS DE MATERIAIS ELÉCTRICO / ELECTRÓNICOS
ABFALLENTSORGUNG ELEKTRISCHES / ELEKTRONISCHES MATERIAL
RECOGIDA DE RESIDUOS ELECTRICOS / ELECTRONICOS
COLLECTE DES DÉCHETS DE MATÉRIEL ELECTRIQUE / ELECTRONIQUE
VERZAMELING AFVAL ELEKTRISCH / ELEKTRONISCH MATERIAAL

(UK) EU directive 2002/96/EC classifies this product as an electrical or electronic tool.
Do Not dispose of this tool as unsorted municipal waste.
Dispose of this tool at a collection or recycling centre according to local and national law.
The consumer has an important role in reducing the disposal of waste by returning waste electronic/electrical tool for recycling. Recycling avoids the dispersion of hazardous materials into the municipal waste stream.
The crossed-out bin symbol reminds the user not to dispose of this product as unsorted municipal waste.

(I) Ai sensi dell'art. 13 del Decreto Legislativo 25 luglio 2005, n°151 "Attuazione delle Direttive 2002/95/CE, 2002/96/CE e 2003/108/CE, relative alla riduzione dell'uso di sostanze pericolose nelle apparecchiature elettriche ed elettroniche, nonché allo smaltimento dei rifiuti.
Il simbolo del cassonetto barrato riportato sull'apparecchiatura o sulla confezione indica che il prodotto alla fine della propria vita utile deve essere raccolto separatamente dagli altri rifiuti.

L'utente dovrà, pertanto, conferire l'apparecchiatura giunta a fine vita agli idonei centri di raccolta differenziata dei rifiuti elettronici ed elettrotecnici, oppure riconsegnarla al rivenditore al momento dell'acquisto di una nuova apparecchiatura di tipo equivalente, in ragione di uno a uno.
L'adeguata raccolta differenziata per l'avvio successivo dell'apparecchiatura dismessa al riciclaggio, al trattamento e allo smaltimento ambientale compatibile contribuisce ad evitare possibili effetti negativi sull'ambiente e sulla salute e favorisce il reimpiego e/o riciclo dei materiali di cui è composta l'apparecchiatura.
Lo smaltimento abusivo del prodotto da parte dell'utente comporta l'applicazione delle sanzioni amministrative previste dalla normativa vigente.

(P) A directiva 2002/96/EC classifica este producto como um instrumento eléctrico/electrónico.
Não deitar este instrumento com lixo municipal não classificado.
Deitar este aparelho em um centro de recolha ou de reciclagem segundo a lei local e nacional.
O consumidor tem uma importante responsabilidade na redução do lixo, preparando a reciclagem dos instrumentos eléctrico/electrónicos. A reciclagem previne a dispersão de materiais perigosos nos lixos minicipais.
O símbolo da barra no barril lembra ao utilizador de não jogar este producto como um lixo municipal não classificado.

(D) Gemäß Richtlinie 2002/96/EC wird diese Produkt als elektrisches/elektronisches Gerät eingestuft.
Dieses Gerät nicht als nicht klassifizierten Stadtmüll beseitigen.
Diese Gerät an eine dafür vorgesehene Sammelstelle bringen, gemäß den vorortigen und auf nationalem Gebiet geltenden Gesetzesbestimmungen.

Der Verbraucher kann beträchtlich dazu beitragen den Abfall zu verringern, indem er ein Recycling der elektrischen/elektronischen Geräte vorsieht.

Ein Recycling verhindert, dass gefährliches Material im allgemeinen Stadtmüll beseitigt wird.
Das Symbol mit ausgestrichener Tonne soll bedeuten, dass das damit gekennzeichnete Produkt nicht als nicht klassifizierter Stadtmüll zu beseitigen ist.

(ES) La directiva 2002/96/EC clasifica este producto como un aparato eléctrico/electrónico.
No tire este aparato como si fuera un residuo municipal no clasificado.
Tire este aparato en un centro de recogida o de reciclaje según la ley local o nacional.
El consumador cumple un papel importante en la reducción de la eliminación de residuos, predisponiendo el reciclaje de los aparatos eléctricos/electrónicos. El reciclaje previene la dispersión de materiales peligrosos en la gran cantidad de residuos municipales. El símbolo del bidón con una banda transversal recuerda al usuario que no debe tirar este producto como si fuera un residuo municipal no clasificado.

(F) La directive 2002/96/EC classifie ce produit comme appareil électrique/électronique.
Ne pas jeter cet appareil avec les déchets municipaux non classifiés.
Jeter cet appareil dans un centre de collecte ou de recyclage conformément à la loi locale et nationale.
Le consommateur joue un rôle important dans la réduction des déchets, en prévoyant le recyclage des appareils électriques/électroniques. Le recyclage permet d'éviter la dispersion de matériau dangereux dans la masse des déchets municipaux. Le symbole du bidon barré rappelle à l'utilisateur de ne pas jeter ce produit avec les déchets municipaux non classifiés.

(NL) De richtlijn 2002 / 96 / EC classificeert dit product als een elektrisch / elektronisch gereedschap.
Gooi dit gereedschap niet weg als een niet geclassificeerd gemeentelijk afval.
Breng dit gereedschap in een verzamel- of verwerkingscentrum volgens de plaatselijke en nationale wet.
De verbruiker speelt een belangrijke rol in het verminderen van het afval door de verwerking van de elektrische / elektronische gereedschappen voor te bereiden.
De verwerking voorkomt de verspreiding van gevaarlijk materiaal in de massa van het gemeentelijk afval.
Het symbool van de versperde vuilnisbak herinnert aan de verbruiker dit product niet weg te gooien als een niet geclassificeerd gemeentelijk afval.

ATTACHMENT I – CE declaration

CE DECLARATION OF CONFORMITY

THE PRODUCER

EVOWATER
Falkenstr 2
Westerheim
72589 Germany

DECLARS THAT THE PRODUCT

UO-COMPACT 150

DISH/WASHMACHINE TREATMENT WATER DEVICE

IS DESIGNED AND BUILT IN CONFIRMITY WITH THE FOLLOWING DIRECTIVES:

MACHINES	2006/42/EC
LOW VOLTAGE	2006/95/EC
ELECTROMAGNETIC COMPATIBILITY	2004/108/EC
HOUSEHOLD AND SIMILAR ELECTRICAL APPLIANCES – SAFETY	EN60335-1:2004

The manufacturer also declares that the technical construction file is kept by _____.

EVOWATER

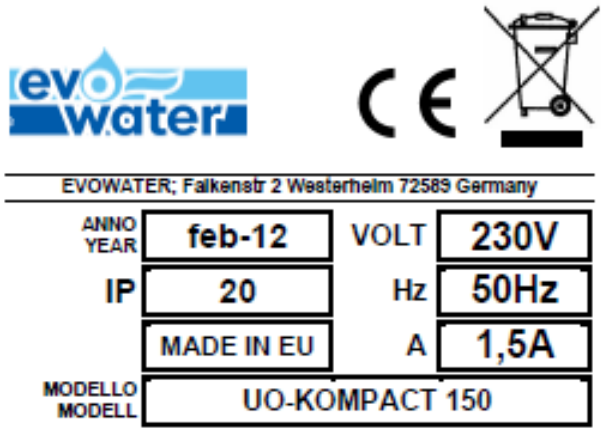
ATTACHMENT II – Spare parts UO-COMPACT 150

Spare parts for routine maintenance			
Code	**Description**	**Code**	**Description**
Y21409B	Profine BLUE carbon block cartridge	8096072	Kit with 2 membranes 3012 with vessel tested and sealed with caps.
8096070	Vane pump 300l/h sealed with fittings	5200152	Solenoid valve 3/8" FF 230V faston

Spare parts for extraordinary maintenance			
Code	**Description**	**Code**	**Description**
1100128	Vessel 3012	8096071	Motor 180W liquid cooled with fittings
Y21305B	Profine Head single side w/round support	8098000	Electronic board think-ro
9400330	Bypass valve ¼"	8096075	Low pressure switch w/fitting and o-ring
1100126	O-ring 3.53x4.34	8096073	Cond. Probe 3/8" K5 w/o-ring
1100166	O-ring 2.62x13.95	1100232	O-ring 1.78x11.11
1100258	O-ring 3x9	1196078	Bumper MF d.20 h.25 M6
8000112	Leakage probe	8096074	Max pres switch ¼" 100-600 kPa w/o-ring

Pipe fittings and components for installation			
Code	**Description**	**Code**	**Description**
1196117	Block 35x35x92 ¾"M	9300359	Stem adapter 10 x3/8" bspp
1197032	Check valve insert DW10	9300383	Stem elbow ¼"
8096060	Assembled permeate block	9300679	Elbow 3/8" – 5/16"
9300121	Bulkhead 3/8"in ¼" out	9300388	Stem elbow 6mm
9300164	Elbow 6mm	9300391	Stem elbow 8mm
9300170	Elbow 8mm	9300392	Stem elbow 10mm
9300174	Elbow 10mm	9300403	T 8mm
9300175	Elbow 12-6mm	9300404	T reduced intermediate 10 – 6 mm
9300221	Clip 10mm	9300469	Famale adapter 6 x ¼" BSP-P
9300257	Male connector 8x1/4" BSPP	9300518	Stem elbow 10-8 mm
9300259	Male connector 10 x 1/4" BSP-P	9300518	Stem elbow 10-8mm
9300260	Male connector 10 x 3/8" BSP-P	9300671	Bulkhead MF 3/4" 3/8"
9300272	Male connector 3/8" x ¼" BSPT	9300672	Power fitting elbow ¼" 3/8"
9300298	Plug ¼"	9300675	Reduction ¼" 5/32"
9300310	Reduction 4-6mm	9300678	Washmachine pipe ¾" FF elbow DN13
9300338	Stem adapter 8 x ¼" BSPT	9400330	Panel mounted bypass valve
9300339	Stem adapter 8 x 3/8" BSPT	9400331	Nut ¾" G brass
9300357	Stem adapter 8 x 3/8" BSP-P	9300163	Elbow 3/8"
9300258	Male connector 8x3/8 BSP-P	9300400	T 6mm

ATTACHMENT III – CE LABEL



ATTACHMENT IV – Maintenance Log

INSTALLATION		
TECHNICIAN	**DATE**	**SIGNATURE**
REGULAR MAINTENANCE		
TECHNICIAN	**DATE**	**SIGNATURE**